

DEFAULT RISK AND FISCAL SUSTAINABILITY IN PIIGS COUNTRIES: THE ROLE OF FINANCIAL MARKETS

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Very preliminary version

Abstract

European Monetary Union experiences the division into two major blocks according to their ability to respect fiscal criteria and replace their bonds on the market. The so-called PIIGS countries are asked to realize a severe reduction of their deficit and debt to prevent speculative attacks and preserve the Currency Union. The aim of the paper is to show that speculative attacks on government debt are not directly linked to default probability, but to liquidity requirements and to the EU fiscal constraints. In times of crisis the path of deficit/GDP ratio goes up and send the signal that governments are loosening their fiscal stance. As far as there are liquidity constraints, markets increase the spreads and, because of the hard increase of refinancing costs, force governments to fiscal retrenchments. The result is that in the absence of a bailout shared mechanism financial markets give policy prescriptions and exert a political pressure without having fiscal sovereignty.

Keywords: Fiscal policy, sovereign debt crisis, EMU

JEL classification: E61, E65, F33

1: Introduction

European Monetary Union after 2007 financial crisis have been experiencing the division into two major blocks according to their ability to respect fiscal criteria and replace their bonds on the market. The so-called PIIGS countries are asked to reduce their deficit and debt considerably in order to prevent speculative attacks and preserve the financial stability of the Currency Union.

Fiscal Policy in Europe has followed alternative phases: it started in 1999 with an initial rigidity an intermediate period of a certain degree of tolerance during and now a new phase of greater rigidity has been announced in the European Council of the 23rd and 24th of march 2011.

This new rigidity phase however has been announced but it has not started yet. The council stated that the for the year 2012 the ratio deficit/GDP has to remain inside the limits of 3% and in cases of high public debt the strategy has to be very rigid in order to consolidate the reduction trend.

During the period after the financial crisis many EMU countries were forced to use fiscal policy and automatic stabilizers to reduce output fluctuation and to contrast the lack of aggregate demand. Therefore the “unsound” public finance has been, for a certain period of time, a shared problem. Now that recovery has begun, some countries have again a sustainable public finance while some others, having a great level of initial debt, or a big exposure to fluctuations, are in great difficulty to respect the Stability and Growth Pact.

These countries – called PIIGS Countries from the initial letter of their name Portugal, Ireland, Italy, Greece and Spain – live under the threat of speculative attacks toward their public debt. The common belief is that speculative attacks depend on default probability of each country. In other words, because their debt is unsustainable it could be possible that they exit the Monetary Union and/or decide to not pay back the public debt or convert it in a devaluated currency. For this reason

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financial markets increase the spread in respect to German bonds, asking for greater returns as a counterpart of the greater risk.

In considering a country - unlike the case for the assessment of a firm debt sustainability – the evaluation of default probability requires much more complex arguments.

Considering the case of the EMU, where monetary sovereignty belongs to the European Central Bank, to make default, whatever form it takes, means that a single country: 1) can no longer enter financial markets for a long time, 2) experiences an increase in interest rates and a consequent reduction of aggregate demand, and 3) see increased domestic inflation and reduced consumers purchasing power; 4) see its (real) exchange rate devaluated and the cost of imported goods increased¹.

To make default or incur in a “credit event” means therefore to bear a reduction in terms of aggregate demand even higher than that resulting from IMF and the European Council prescriptions to get the aids.

It derives therefore that the conditions defining the willingness to pay is a different matter from the ability to pay. So a question arises: if the probability of default for PIIGS countries is not very high why the yield spreads over German bonds required by the financial markets increase?

The three countries already subjected to speculative attacks, Greece, Ireland and Portugal appear to have the highest share of debt held abroad. When the debt is held abroad, the costs of the fiscal retrenchment are not borne by the same subjects that receive the benefits of both debt repayment and higher yields. The absence of a developed domestic financial market exposes PIIGS countries to the blackmail of foreign financial markets, forcing the countries to adopt without appeal the European economic policy requirements.

It happens therefore that financial markets – playing the role covered by the excessive deficit procedure (EDP) under the Stability and Growth Pact - impose certain routes that are going to be accepted by countries in difficulty, involving very high social costs in the short term and perhaps - as the mainstream claims- a higher long-term growth. The premise – however - does not seem to be a good starting point.

The aim of the paper is to show that speculative attacks on government debt are not directly linked to default probability, but to liquidity requirements and to the EU fiscal constraints. In times of crisis the path of deficit/GDP ratio goes up and send the signal that government are loosening their fiscal stance. As far as there are liquidity constraints and the debt is held abroad for the greater part, external financial markets increase the spreads and, because of the hard increase of refinancing costs, force governments to fiscal retrenchments (Bernoth e Wolff 2008 and Guichard et al el. 2009). Moreover, the over the counter instrument of Credit Default Swaps (CDSs) create an opportunity of greater returns for international investors. The result is that in the absence of a bailout shared and automatic mechanism financial markets give policy prescriptions and exert a political pressure without having fiscal sovereignty.

The paper is organized as follows: the next paragraph describes the evolution of fiscal policy in Europe in respect of how the stability and growth pact has been applied during the past years. The third paragraph discusses the economic conditions of the PIIGS countries with the eye of evaluating the default probability. The fourth paragraph presents a model about the role of financial markets on fiscal sustainability. The last paragraph derives some conclusions.

2.The path of fiscal policy in Europe

Fiscal Policy, since EMU started in 1999, have been following different degrees of rigidities moving from an initial strictness toward an intermediate certain laxity and back again in recent times to a more strong and rigorous prescriptions for governments.

¹ The interactions between monetary and fiscal policy under different currency regimes during debt crises are deeply investigated in Nersisyan and Wray (2010).

The theoretical underpinnings have been always the crowding out effects, the Ricardian equivalence theorem (Barro 1974) and the instability effects on expectation of a long run unsound public finance (Giavazzi and Pagano 1996). Because public expenditure is unable to change the long run equilibrium income it is better to avoid the real and financial instability deriving from the excessive issue of public debt. Fiscal discipline is a necessary prerequisite for a long run stable growth.

National governments belonging to the EMU are supposed to respect rigid parameters and cannot use fiscal policy freely to increase growth and employment (Arestis, McCauley and Sawyer 2001, Arestis and Sawyer 2003, 2005).

Despite these theoretical foundations the European institutions attitude toward fiscal policy has changed through time, reflecting the contingent difficulties of the major countries.

The first phase can be recognized as rigid: the Stability and Growth Pact (SGP) (1996) was the natural pursuance of the convergence criteria defined in the Maastricht Treaty (1992). The SGP defined the constraints for the EMU member countries to follow a fiscally virtuous behavior even after the adoption of the single currency.

The SGP bind to not exceed a ratio of GDP government deficit of 3%, except in cases where the decline in the rate of output growth in real terms, had not fallen by more than two percentage points. The existence of a high level of debt had to be followed by a procedure of reduction of the ratio with the GDP equal to 0.5% per year.

In case of overshoot of the limits, Countries in deficit were subject to so-called excessive deficit procedure (EDP)

The EDP consists of the following phases:

a) The preventive arm:

Member States should submit the plans for sound public finances.

The EU Commission and the Council expresses its opinion. If the assessment is negative, the commission formulates:

- an early warning to prevent excessive deficits.
- A policy advice, suggesting policy recommendations to achieve the goal.

b) The dissuasive arm

- If the deficit exceeds the limit of 3% ratio to GDP the country is subjected to the excessive deficit procedure (EDP).

This last defines: i) time limits to return inside the values and ii) the penalties for the overrun.

A second phase has been characterized by changes in the direction of a minor rigidity.

In March 2005, the ECOFIN decides to make some changes to the workings of the SGP ("Improving the Implementation of the Stability and Growth Pact" drawn up by the Ecofin Council in March 2005): its benchmarks, i.e. 3% for the government deficit and 60% for public debt ratio to GDP remained unchanged but a greater tolerance is allowed for countries showing high divergence of current growth from its potential level. The changes include:

a) No structural adjustment of debt:

b) If there is a long-term sustainability of public finances, countries can temporarily deviate from the path of adjustment over the medium term.

c) The EDP is not implemented not only in case of a reduction of 2% of GDP but also in cases of negative growth rates or loss of product for a long period in respect to potential growth.

A third phase of fiscal policy in Europe has been implemented in recent times. In the 24th and 25th of May, 2011, the European Council decided that the Member States had to present a multi-year repayment plan with the goal of bringing the deficit below 3% and for ensuring the long-term sustainability of public accounts.

The principle of an annual structural adjustment for countries having an excessive debt / GDP ratio is re-introduced. This may exceed the structural adjustment of 0.5%, provided by the first SGP in cases of particular public finance imbalances countries (PIIGS).

The text states as follows: “In particular, Member States will present a multi-annual consolidation plan including specific deficit, revenue and expenditure targets, the strategy envisaged to reach the targets and a timeline for its implementation. Fiscal policy for 2012 should aim to restore confidence by bringing debt trends back on a sustainable path and ensuring that deficits are brought back below 3% of GDP in the timeframe agreed upon the Council. This requires in most cases an annual structural adjustment well above 0.5% of GDP. Consolidation should be frontloaded in Member States facing very large structural deficits or very high or rapidly increasing levels of public debt” (EU summit 2011)²

In addition the commission asks for the introduction inside the framework law or constitutions of rigid rule assuring the respect of the SGP.

At the same time the European Council announces the creation of an European Stability mechanism (ESM) after June 2013 with the proportional contribution of all the EMU countries.

Countries experiencing public finance difficulties can get aid “under strict conditionality” or in other word with the strict commitment to make sound their public accounts.

At the moment however this bailout mechanism - which is supposed to be automatic and with a proportional contribution of each EMU country - has not started yet and the management of fiscal policy is in the hands of single states, financial markets and the willingness of major and sound countries to help PIIGS ones.

2.The increase of spreads and default probability in PIIGS countries

Economic literature explains the increase of spreads with German yields mainly through the liquidity need of government after a shock, i.e. the financial crisis. (Barrios et al. 2010).

When a government incurs in liquidity crisis, financial markets make them pay much more in order meet the contingent necessities. This spread is greater as greater is the tightening of financial markets and public finance constraints (Bernoth e Wolff 2008 Sgherri e Zolli 2009 Haugh et al el. 2009).

Figure 1a shows the Euro Area 10-year sovereign bond yields from January 2006- to April 2011.

Just few month after the failure of the Lehman Brother’s, the crisis diffused its effects. At the beginning of the year 2009 Greek and Irish government bond yields started to increase. Just few month after it was the time of Portugal. For these countries, especially for Greece, the situation became explosive at the end of the year 2009. And then in January 2010 Ireland government bond yields started to increase too, while French and German ones started to decrease. Spain and Italy did not experienced a severe increase in ten years maturity government bond yields.

² The full text of the EU Summit is available at <http://register.consilium.europa.eu/pdf/en/11/st00/st00010.en11.pdf>

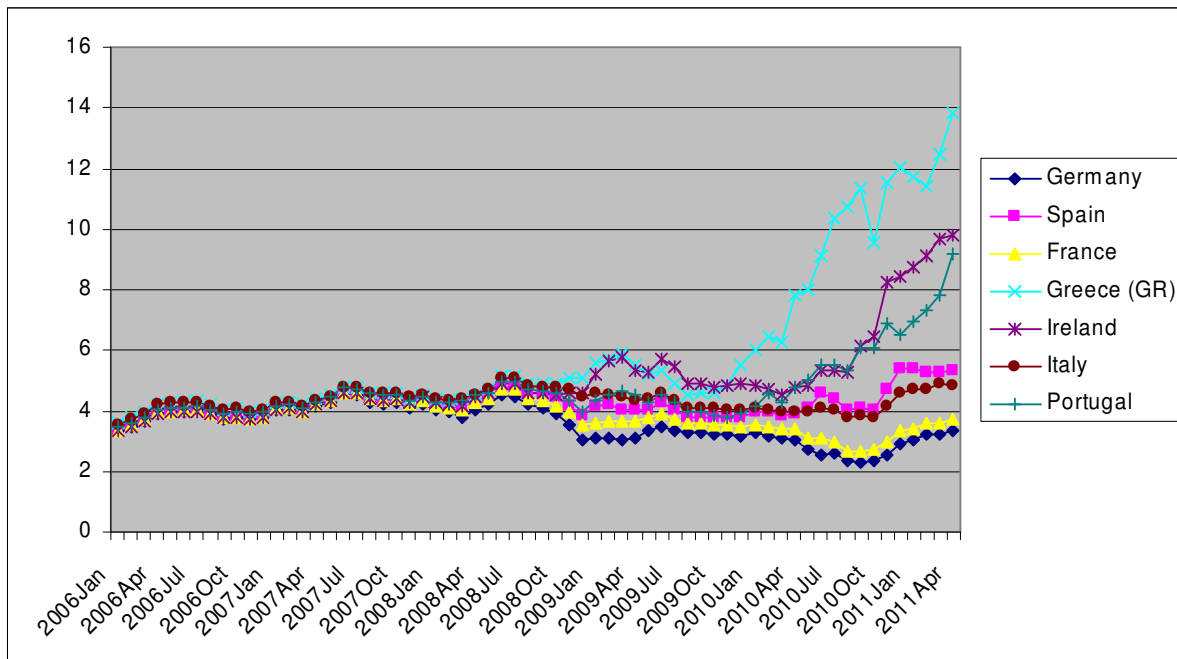


Figure 1a. Euro Area 10-year sovereign bond yields January 2006-April 2011. Source: ECB

After the increase of spreads it happened also an increase of CDSs basis points telling the story of an increase of market belief that default of these countries was becoming probable (Figure 1b).

Greece, Ireland and Portugal show the greatest increase in CDSs basis points. Spain and Italy appear rather reliable at the moment.

However, while the greater spreads with German government bond yields appear to be the signal of the fact that a refinancing has to be paid more, it cannot be automatically concluded that greater spreads anticipate the default probability of a single country.

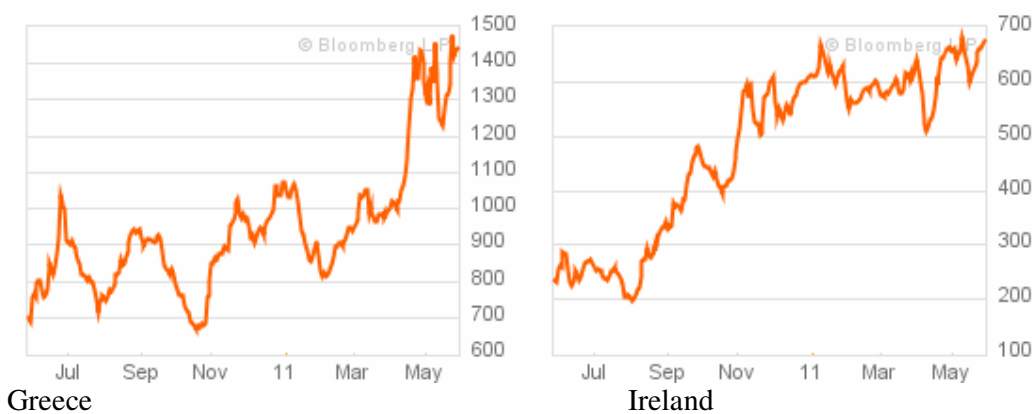




Figure 1b. CDSs basis point during the last year.

The theory about the OCA (Mulndell 1992) states that if a Country wants to join a currency union has to have a great labour market flexibility, in order to offset the shocks without using the exchange rate or other monetary policy instruments.

However, once a country is already inside the currency union and experiences great difficulties in output growth without the possibility of using the fiscal instrument to make output to reach its potential level, has to evaluate, in the same way, costs and benefits of remaining inside the EMU.

In other words, as it happens in every fixed exchange rate mechanism, because the cost of adjustment is held on the shoulders of countries experiencing low aggregate equilibrium income, the willingness to pay is measured by the evaluation of costs and benefits of remaining inside the currency area. If costs are greater then the benefits, the country makes default and exit the currency area, while it happens the contrary if benefits are greater then costs. It can be interpreted as an extension of the conclusions of the second and third generation models about speculative attacks in a fixed exchange rate area according to which the main cause of abandoning the exchange rate has to be found in conflict between the objectives of the economic policy. In fact, the authorities not only have the responsibility of managing fixed parity but also that of minimising a social loss function (Obstfeld (1986 a, b, Jeanne (1997) and Spadafora 1999).

Using descriptive statistics following the indicators used in Cantor and Packer (1996) we can deeper investigate the default probability of PIIGS countries³

³ Cantor and Packer (1996) use these indicators to evaluate sovereign ratings.

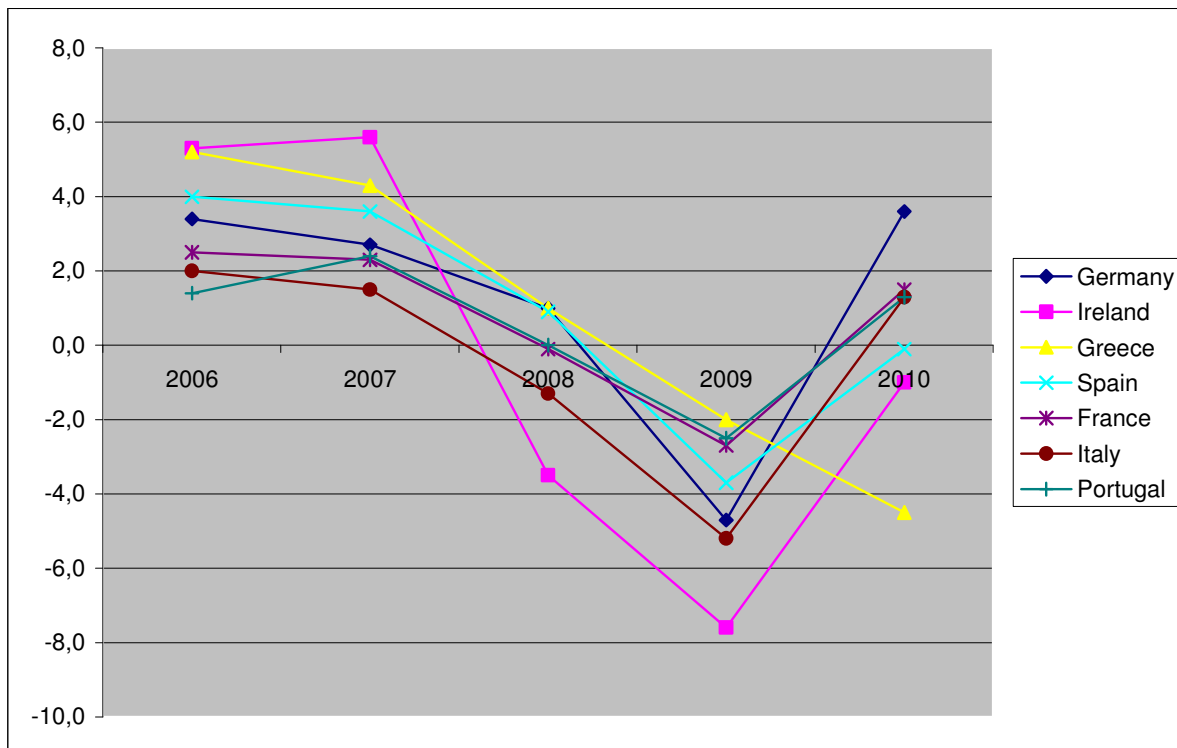


Figure 2. Real growth rate of GDP of PIIGS countries France and Germany. Source: Eurostat.

Figure 2 shows the real growth rate till the year 2010 of the five PIIGS countries, Germany and France. After the crises all the European Countries experienced high decreases of growth rates. All countries had a negative growth rate after 2008. The year 2009 represents the time of the inversion of the negative path except for Greece, whose negative trend of GDP growth rate did not inverted.

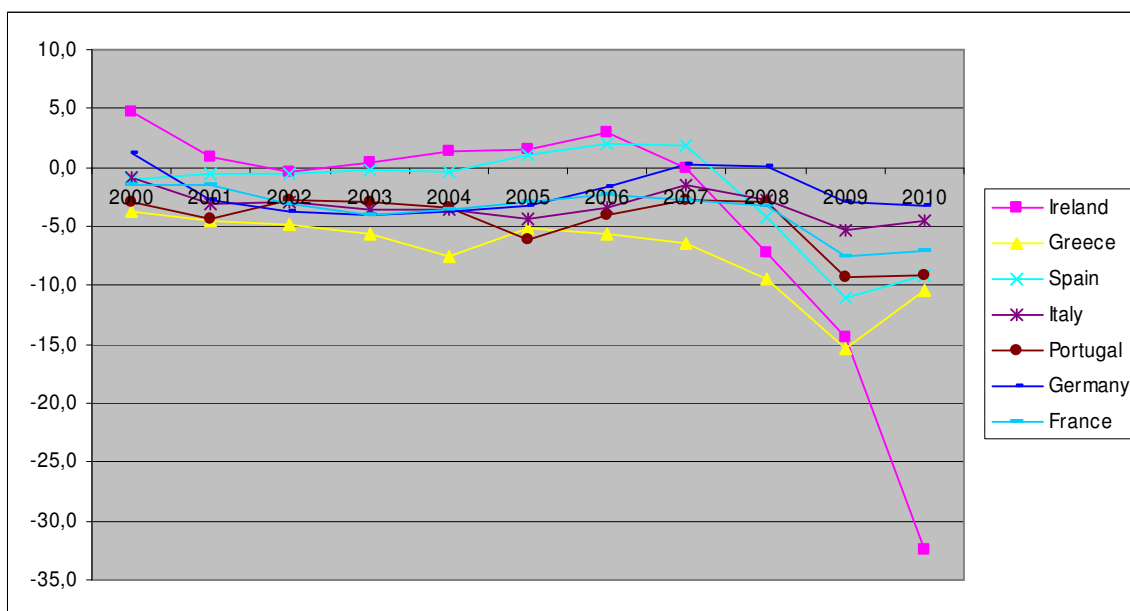


Figure 3. Net lending (+)/Net borrowing (-) under the EDP (Excessive Deficit Procedure) of the PIIGS Countries, France and Germany. Source Eurostat

Financial crisis deteriorated public accounts and increased the public deficit.

Figure 3 shows the deficit dynamic till 2010

The best performance was reached by Germany; Italy was able to contain the deficit increase also. The worst by Ireland which reached the level of 32% of GDP (including bank recapitalization), followed by Greece whose deficit reached almost the level of 15% in 2009 but in 2010 it is not very far from Spain and Portugal (10% of GDP)

Figure 4 shows the debt dynamic.

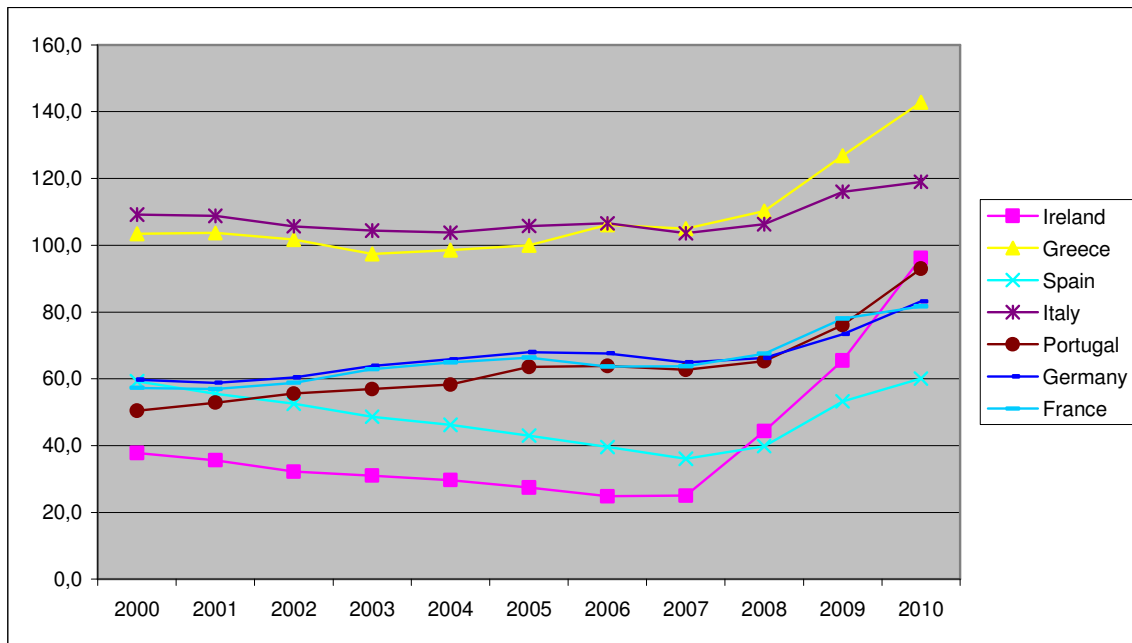


Figure 4. Government consolidated gross debt as a percentage of GDP of the PIIGS Countries, France and Germany. Source Eurostat.

After the 2007 financial crises there was an upward tendency of debt dynamic for all of these countries. For Ireland the increase was much more great than the other countries, despite the initial level at the year 2000 was under 40% and with a decreasing tendency till 2007. Similar observations can be done for Spain, starting at the year 2000 with a debt/GDP ratio of 60% and a value of less than 30% before the crisis..

The initial level of Portugal's debt was about 50%, but the purple line shows that it has never been decreasing during the years considered. Greece and Italy have a very similar tendency of the debt dynamics. Both countries have a level above 100% for the whole period and an increasing upward slope after the year 2007. It's known that Greece declared that the accounts published were not correct and the new government was obliged to revise toward a worsening of public balance.

Surprisingly, French and German debt/GDP ratio is well above that of Spain and almost equal to Ireland and Portugal.

Theory states that the debt can be repaid without a further fiscal retrenchment if there is a current account surplus.

Figure 5 shows the current account dynamics in the last ten years as a percentage of GDP.

Ireland has always been experiencing a current account surplus. After a decline of six percentage point between the years 2002-2008, the path inverted and the surplus reached a level of 19% in terms of GDP.

Italy's lines describes a trend near to zero, with a slow decline for the entire time interval.

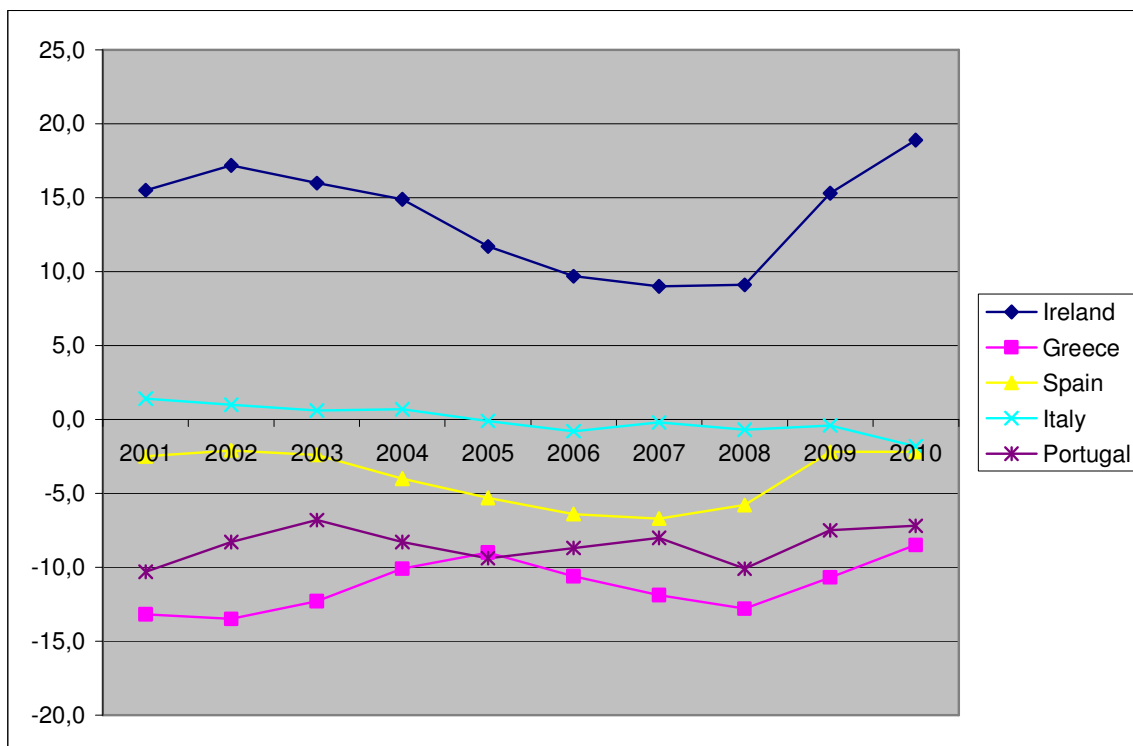


Figure 5. External balance of goods and services as percentage of GDP

Spain is always in deficit, but in the last two years the situation improved. Portugal has deficit below 8% and sometimes reaching 10%. Greece has a current account deficit almost always below 10% with a tendency to decrease from 2008.

It appears therefore that at least for Portugal and Greece there is a condition of external accounts showing that they have difficulties in getting additional resources from abroad to repay the debt.

But if a current account surplus give an approximate measure of the capacity to have a sound finance, a further point can be added if we observe the path of the term of trade (figure 6):

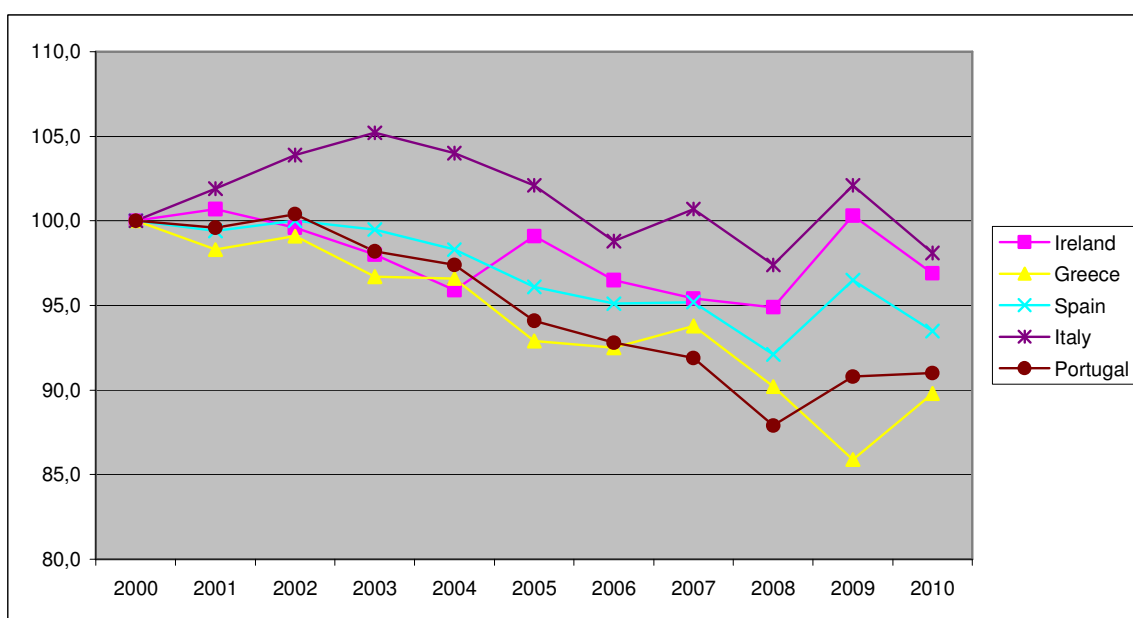


Figura 6. Terms of trade in PIIGs countries.

It appears that from 2008 Ireland, Spain, Italy and Portugal had an improving of their terms of trade assessing that these four countries have received for their exports an increasing value in respect for what they pay for imports. Greece on contrary have had a deteriorating term of trade from 2007 till 2009. The year 2010 – despite a value less then 100 - shows an improvement just for Greece. A general look can bring us to conclude that a devaluation following a default would very probably further decrease the welfare of Greece inhabitants.

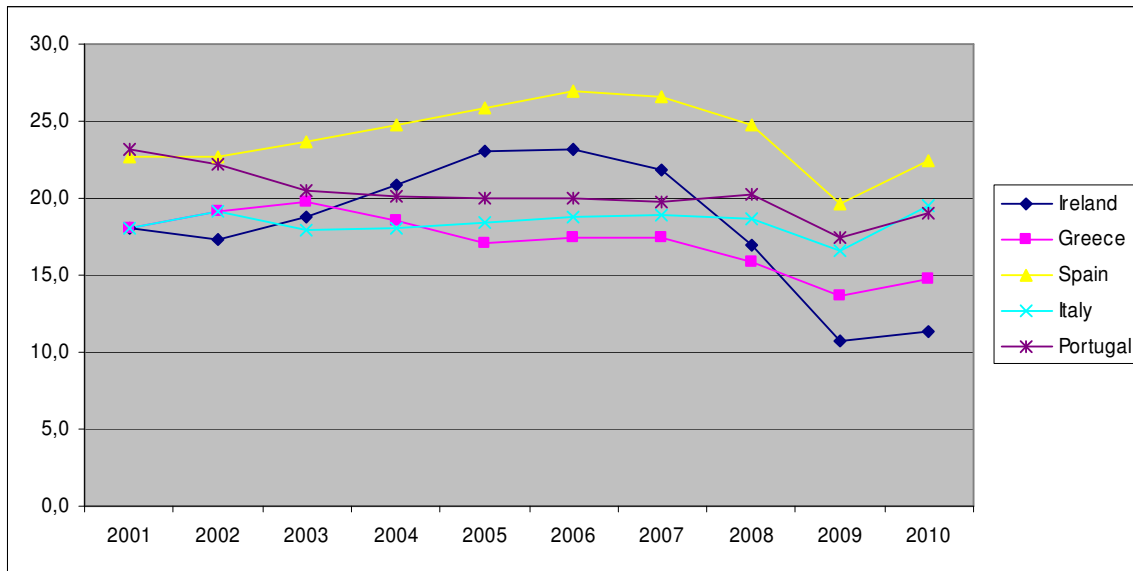


Figure 7. Gross fixed capital formation as percentage of GDP in PIIGS Countries.

A further element to take into account to evaluate the economic conditions of PIIGS countries with the eye of measuring the probability of default is the private gross capital formation. In fact a default increase interest rates having very negative effects on aggregate demand if the portion of this component is high.

From figure 7 it appears that during the years pre-crisis Spain and Ireland had a percentage of GDP well above 20% of gross fixed capital. After the crisis it declined sharply testifying a great exposure to financial crisis of their aggregate income. Therefore the increase of interest rates would further decrease this component aggravating the decline of output registered in previous years. Additional arguments come from the slow recovery of the year 2010.

Finally the rate of change of the Harmonized Index of Consumer prices (figure 8) shows that in Italy, Spain and Portugal, the internal inflation rate during 2010 reached almost the same level. In Ireland there is – despite three years from the crisis – a deflationary trend. In Greece there is an inflation rate well above the average value of the entire Euro area.

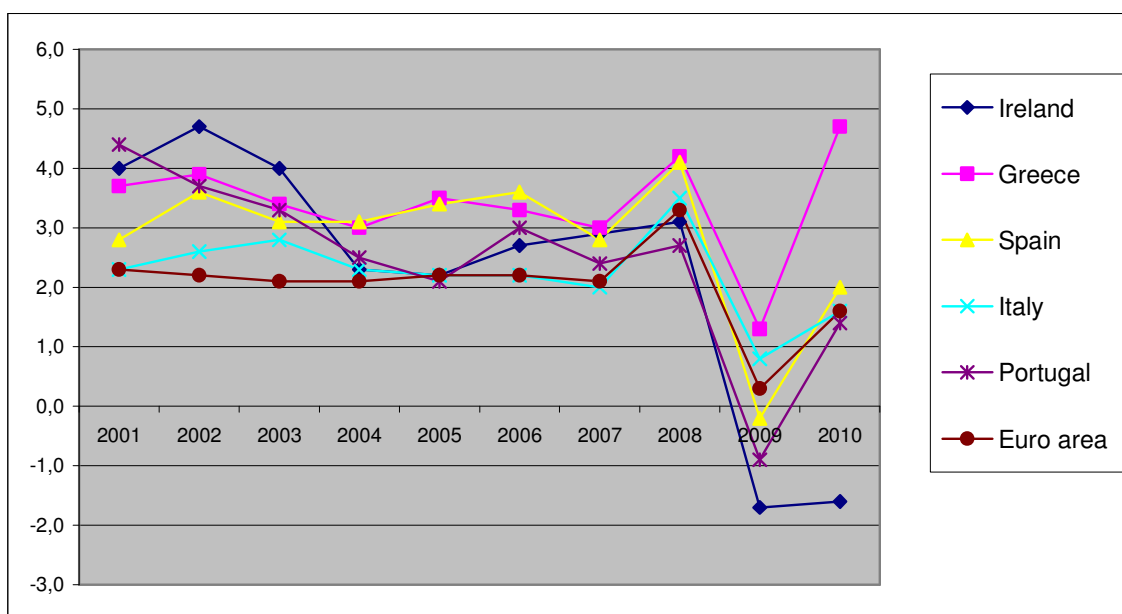


Figure 8. HICP rate of change (2005=100) - Annual Data (average index and)

Given the macroeconomic performance of the five PIIGS countries it is possible to summarize our descriptive statistics as follows:

- 1) All PIIGS countries, except Italy experienced a sharp increase of deficit/GDP ratio
- 2) Italy and Greece has the greater debt in terms of GDP
- 3) Ireland has a current account surplus, increasing in the last years; Italy a rather stable percentage, even if worsening in the last year. Spain, Portugal and Greece have imports greater than exports in terms of GDP.
- 4) Greece has the worst performance of current account balance taking into account the terms of trade.
- 5) In Ireland and Spain there was a great decline of gross fixed capital formation after the crisis.
- 6) Greece has had an inflation rate overcoming the average of Euro area for the whole period. For the year 2010 this excess is near 3%.

Therefore if the spreads with German bonds and the increase of CDS basis points are right, there is something rather puzzling. If it is the level of debt the main indicator financial market look at, the financial speculation would have regarded first Greece and Italy, if it is the deficit, it is not clear why Spain has still remained outside the turmoil. If it is the ability to pay for the debt through the external resources it cannot be explained why Ireland was the second country to receive the speculative attack. If the default implies a depreciation of the currency, it is not clear, why countries with external deficit and with an inflation rate higher than the average – especially those with a deteriorating term of trade – would exit the currency area. If it is the effects on interest rates of a devaluation following the default it is not clear why Ireland and Spain would abandon the EMU. This puzzle becomes less confused if we look at amount of Government debt held by non residents (figure 9)

Because of the increasing financial integration, a great portion of the government debt of all these countries is held abroad. Countries like Greece, Portugal and Ireland have a greater external exposure overcoming the 80% in the 3rd quarter of 2009, when the story begun.

The external exposure start to decrease at the end of 2009 remaining however rather great around 60%. This tendency inverted when the spread increased and the credit default swap increased too.

The debt is held inside domestic residents both pay and receive the benefits for the fiscal retrenchment. While if it is held outside of it, domestic residents bear the burden while the benefits are distributed abroad.

We can suppose that, when countries are liquidity constrained, financial markets start to perceive that they can increase their profits, releasing the burden on domestic residents. Spreads increase, Credit default swaps basis points increase too and the amount of debt explodes. The countries whose debt has been hitting by a speculative attack, is forced to reduce the amount of debt and make very hard fiscal retrenchments.

The greater the debt is held abroad the greater is the probability that the country receives a speculative attack. Following this strategy financial markets increase their gains and work as a dissuasive arm.

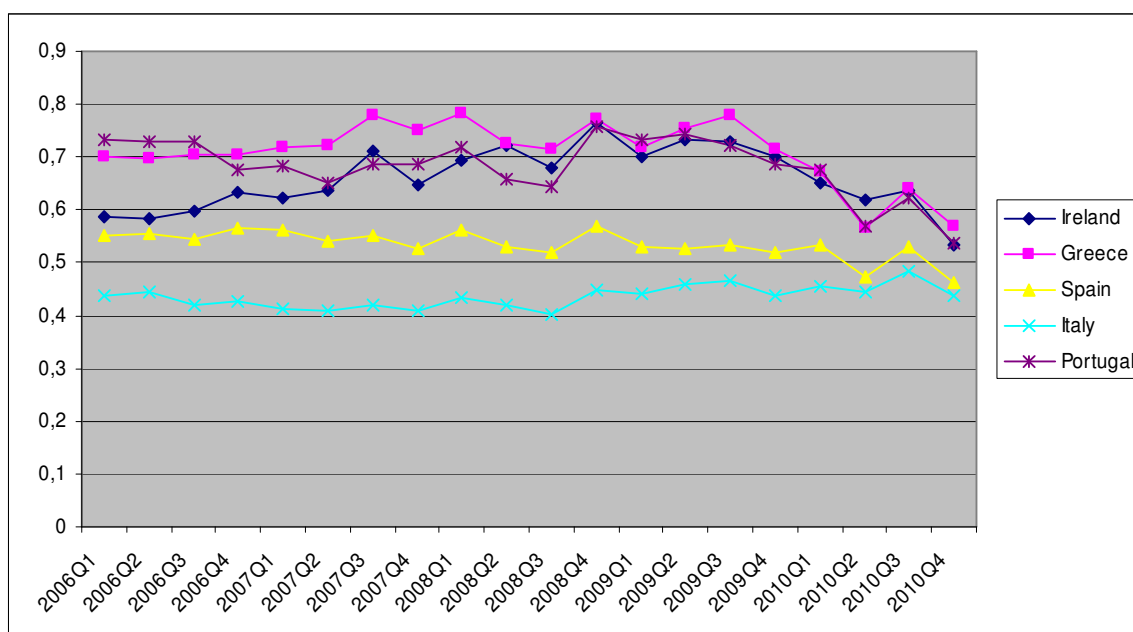


Figure 8. Portion of total External Total Government debt on Total Government debt. Own calculation on World Bank Data and Eurostat.

In this way financial markets force deficit countries to reach a sustainable public finance path, given the fiscal parameters fixed by the Maastricht treaty and consolidated by the SGP. When the internal financial market is sufficiently great to absorb the amount of public debt, the pressure of retrenchment and the gains from eventual increasing spreads are distributed inside the borders and an unsustainable path would be dangerous for each side of the market.

This mechanism cannot be brought ahead for ever. In fact at the same time the percentage of debt held abroad is also a good proxy for the country to release abroad the costs of retrenchment, devalue its currency and restore the competitiveness without excessive reduction of aggregate demand.

However if the greater part of the debt is held inside the Euro-zone it is probable that the major countries, in order to protect the financial stability of the Euro area and the balance sheets of their banks help PIIGS countries further reducing the default probability..

4. A stylized model about fiscal sustainability

An analytical representation can be useful to better describe how financial markets operate to foster liquidity constrained countries to reach a sustainable path of their public finance.

As a general case we can suppose that fiscal policy authorities have a loss function linked to output fluctuations:

$$L_F = L_F \left[-\frac{1}{2} (y - y^T) \right]^2$$

Where y^T is the fiscal policy income target to be realized; y is the aggregate equilibrium income given on the side of demand by the following:

$$y = m - \pi + \varphi_F D + \varphi_F A - \rho(r - \pi^e) + \xi E$$

And on the side of supply by:

$$\pi = \sigma y + \pi^e$$

As in any demand function y increases as real money growth $m - \pi$ increase following the real balance effect, as deficit spending D increases, as autonomous demand A increases as states the income multiplier φ_F , as inflation expectations π^e increase because of the effect on the real interest rates, and as nominal interest rate r increases. The demand increase also if the exchange rate increase, i.e. depreciates.

As it is in any supply function current prices increase with output following the parameter σ and with inflation expectations.

Solving supply and demand for a unique value of equilibrium we can substitute the equilibrium value of y in the loss function. We can then derive and solve for the instrument D , fiscal policy authority can use to target output.

We have the following function expressing how deficit increase according to the variables influencing current output:

$$(1) \quad D_t = \frac{\rho}{\varphi_F} r + \frac{(1-\rho)}{\varphi_F} \pi^e - A - \frac{1}{\varphi_F} m + \frac{1+\sigma}{\varphi_F} y^T - \frac{\xi}{\varphi_F} E$$

Equation (1) can be interpreted as a reaction function or as a demand for funds: fiscal policy authorities, in order to assure a certain value of equilibrium income, has to react positively to interest rate movements. If the target equilibrium income increases, deficit spending has to increase as well. The effect of inflation expectations depends on the value of $(1 - \rho)$. If the effect of inflation expectations on aggregate demand is higher than the negative effect on aggregate supply - or in other words if $\rho > 1$ - deficit spending has to decrease in order to maintain the same equilibrium income. Deficit spending has to decrease if autonomous demand increase and if nominal money growth increases. The relation with the exchange rate is negative stating that a depreciation, if improves the current account surplus, decreases the needs of deficit spending.

In particular the deficit reaction to interest rate movements is given by the following:

$$(1') \quad \frac{\partial D}{\partial r} = \frac{\rho}{\varphi_F}$$

Which shows that the deficit reaction - or liquidity demand - is greater the greater is the effect of interest rates on aggregate demand and is smaller the greater is the multiplier effect of government spending on equilibrium income.

Suppose now that to finance deficit spending fiscal policy authorities has to raise funds on the market; the cost of raising these funds depends on the reference rate the Central Bank sets and on the interest rates financial market apply to finance the increasing deficit.

$$(2) \quad r = r_{bc} + \alpha + \beta D$$

Equation (2) can be interpreted as a supply of funds where $\alpha > 0$ is a constant. Moreover if the country is a sound public finance one $\beta = 0$ if it - in the evaluation of financial markets - has a financial fragility $\beta > 0$.

So that for a sound public finance country it holds:

$$\frac{\partial r}{\partial D} = 0$$

While for an unsound public finance country in search of liquidity it holds:

$$\frac{\partial r}{\partial D} = \beta$$

It has to be noted that a positive value of β does not depend exclusively on the ability of the country to repay its debts, but as a parameter measuring the financial market ability to increase their gains during a turmoil. It is greater as greater is the amount of debt which is held abroad.

In figure 9a fiscal policy authority behaviour and financial market are represented.

The line FP shows the behaviour of fiscal policy: given the current output, the target output the autonomous demand and the exchange rate, government raises deficit when interest rates increase to compensate –or as a result of – the effect of demand reduction.

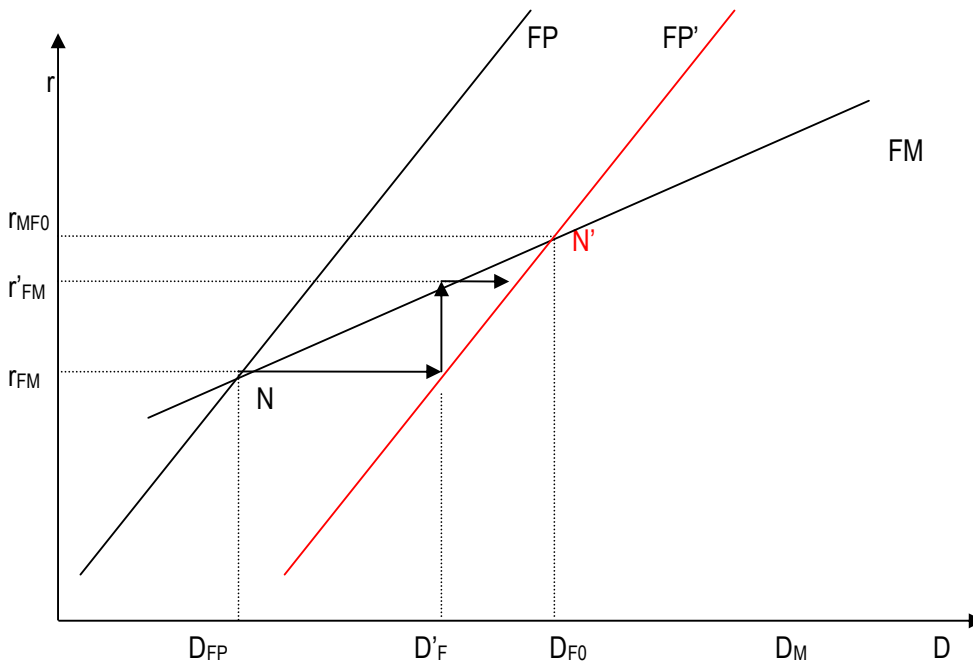


Figure 9a. Sound fiscal dynamics

The slope of the curve FP is given by:

$$\frac{\partial r}{\partial D} = \frac{\varphi_F}{\rho}$$

i.e. the inverse relation described in (1)'

The line FM represents the financial market behaviour to supply funds to cover the increasing deficit.

Its slope is given by:

$$\frac{\partial r}{\partial D} = \beta$$

Suppose as a first case that $\beta \geq 0$ and at the same time $\beta < \frac{\varphi_F}{\rho}$ so that the slope of the FM line is

lower than that of the FP line.

The two lines meet at the point N where the demand for liquidity meets the supply.

Suppose that a negative shock on autonomous demand happens. The FP line moves rightward in FP' increasing the demand for deficit, once given the interest rate. After the shock financial market increase interest rates in r'_{FM} , further enlarging the amount of deficit. The path however shows that a new equilibrium point is reached at point N' where again the fiscal policy reaction function meets the financial market choices.

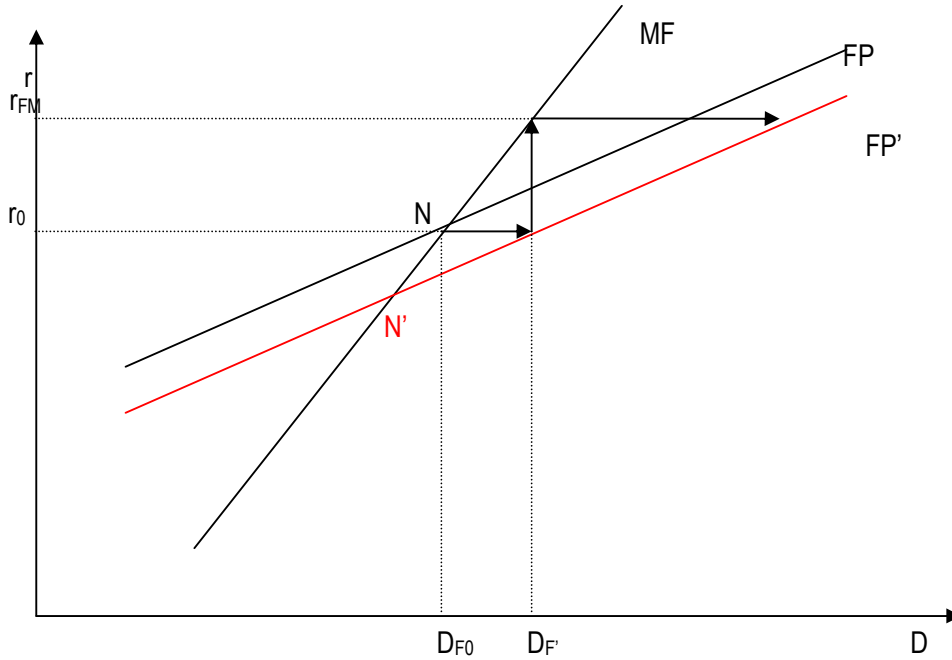


Figure 9b. Unsound Fiscal dynamics

Suppose now that $\beta > \frac{\varphi_F}{\rho}$ so that the line FM has an higher slope the line FP (Figure 9b). A negative shock on aggregate demand moves as in the previous case the FP rightward. In FP', the fiscal policy demand for liquidity increases in D_F' and financial markets apply a greater interest rate which in turn causes an increase of deficit. Figure 9b describes the explosive dynamics of public finance under the condition that financial markets apply an interest rate ever increasing as the needs for liquidity increase. It is to be noted that the new equilibrium level would be far below the current level of deficit.

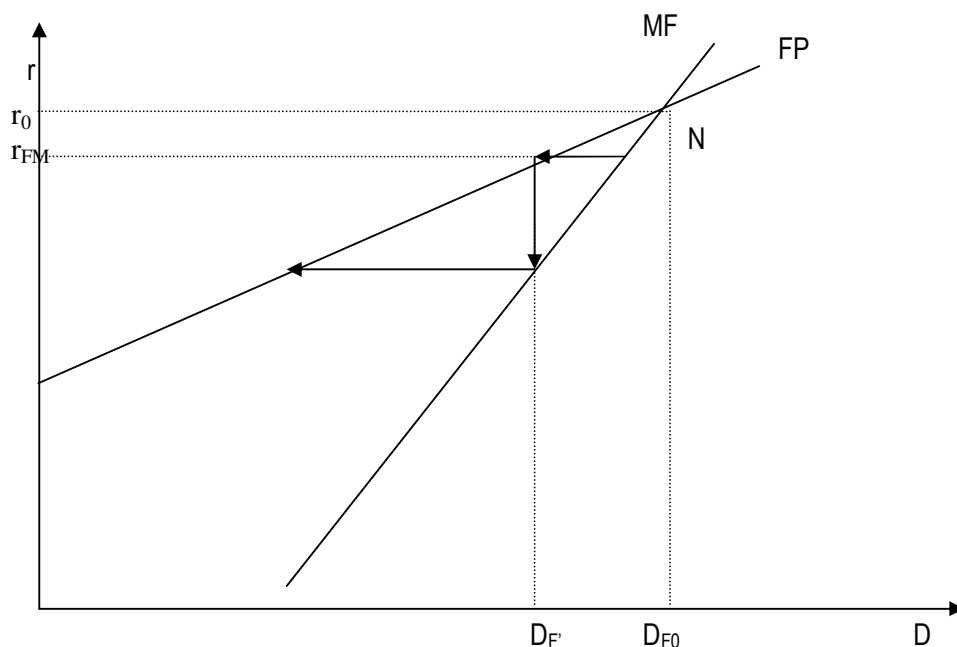


Figure 9c Solution to unsound fiscal dynamics

A positive dynamic of public finances can be restored if government pursues the goal of a lower output causing a movement of the FP curve leftward till an equilibrium point above interest rates applied on the market. In this case it happens an automatic reduction of liquidity needs by fiscal authority and interest rates decrease too. (Figure 9c)

The same solution can be the result of a depreciation of the exchange rate and of the abandoning of the monetary union. This clarifies the fact that as far as it is too expensive for domestic residents to target a lower output, the country has an incentive to depreciate the currency. At the same time planned aids can be proposed to avoid this event (in this case the FM has a smaller slope).

5. Conclusions.

Soon after the financial crisis there was a great increase of deficit in almost all the European Countries. Some of them, despite having a great level of debt in terms of GDP, and reduced rates of growth were excluded from speculation while some others faced increasing spreads and increasing difficulties in managing public accounts.

These difficulties are so great that in one of them – Greece – markets are – at least apparently – betting on the exit from the European Monetary Union.

These self-fulfilling speculative mechanism has two main causes:

- 1) the rigidity of policy structure in Europe.
- 2) The behaviour of financial markets

In fact on the side of fiscal policy there are very hard limits to deficit spending, reinforced by the most important country, Germany which is already outside the financial crisis. On the side of monetary policy there is no possibility to buy bonds on the primary market, helping those countries in difficulty.

Because there is not yet a general agreement about how to help countries in difficulty financial markets increase the spreads and increase profits financing the increasing liquidity needs of PIIGS countries.

It happens therefore that while the structure of fiscal policy in Europe poses the premises of speculation, financial markets play their role in gaining from difficulties.

Financial markets therefore, while Europe is still discussing about the birth of the EFSB, play the role of the dissuasive arm in forcing PIIGS countries to fiscal retrenchments. They impose, with speculative mechanisms, fiscal prescriptions without having fiscal sovereignty (de Grauwe 2011). These combined mechanisms weaken the monetary union and undermine the feasibility of its existence in the long run. Krugmann (2009)

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